

# Miklos VAZSONYI

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Nationality: Hungarian  
Date of birth: 18 October 1978  
Marital status: Married

## Education

- From 2011, currently**      **Istvan Szechenyi University, Gyor, Hungary**  
**Lawyer undivided course (full-time)**  
Expected graduation: 2016 as dr.jur.
- From 2010, currently**      **Budapest University of Technology and Economics, Hungary**  
**Mathematics MSc course (full-time)**  
Expected graduation: 2014 as MSc. in Mathematics
- From 2002, currently**      **Budapest University of Technology and Economics, Hungary**  
**Economic and Organizational Sciences PhD. School (full-time)**  
- Major: Knowledge Based Decision Support, Text Mining, Risk Management  
- PhD topic: Event analysis on stock and option markets with text mining  
- Formal leader of Text Mining Research Group  
Expected graduation: 2013 (as PhD in Economic and Organizational Sciences).
- 2008-2010**      **Budapest University of Technology and Economics, Hungary**  
**Electrical Engineerig MSc course (full-time)**  
- Major: Microelectronics and Modular Circuits  
- Minor: Design and Manufacturing of Electrical Appliances  
Graduated as: MSc. in Electrical Engineering.
- 2001-2003**      **Budapest University of Technology and Economics, Hungary**  
**MSc. Information Technology (full-time)**  
- Major: Banking Data Warehousing  
Graduated as: MSc. in Information Technology.
- 1997-2002**      **Budapest University of Technology and Economics, Hungary**  
**MSc. Engineering Management undivided course (full-time)**  
- Major: Information and Knowledge Management  
Graduated as: MSc. in Engineering Management.
- 1993-1997**      **Kecskemet, Hungary, Janos Bolyai Secondary School**, Mathematics Major
- 1985-1993**      **Kecskemet, Hungary, Laszlo Toth Primary School**, Physical Education Major

## Research

- 2011/2012 1<sup>st</sup> term**
- Universität Wien – Faculty of Mathematics, Austria (Prof. Arnold Neumaier)**
- Mathematical modelling of the semi-strong form market efficiency by using text mining tools for economic news impact analysis.
- 2009/2010 1<sup>st</sup> term**
- Hermes European Center of Excellence on Computational Finance and Economics – University of Cyprus, Nicosia (Prof. Hercules Vladimirov)**
- Quantitative news interpretation methods applied in financial asset pricing.
- 2005/2006 2<sup>nd</sup> term**
- Sacred Heart University: Luxembourg, Luxembourg (Prof. Alfred Steinherr)**
- Early crisis detection and regional financial monitoring and surveillance system research; Monetary and financial integration in East Asia.
- 2005/2006 1<sup>st</sup> term**
- Hermes European Center of Excellence on Computational Finance and Economics – University of Cyprus, Nicosia (Prof. Hercules Vladimirov)**
- Probabilistic neural network based financial portfolio scenario generation
  - Time series analysis with empirical density forecast, stochastic programming
  - Finalizing PhD thesis in textmining and portfolio management (effects of news on financial products measured by semantical news analysis).
- 2004/2005 full year**
- Fulbright Scholar at Carnegie Mellon University  
Tepper School of Business and Center for Automated Learning and Discovery  
(School of Computer Science), Pittsburgh, PA USA (Prof. Alan Montgomery,  
Prof. William W. Cohen)**
- text mining methods, spectral and probability information retrieval
  - neural networks, support vector machines and Bayesian networks
  - expert system development for sales abbreviation expansion, datamining.

## Work experience

- June 2011 – currently**      **Raiffeisen Bank International, Wien, Austria (Business Intelligence Competence Center) – senior IT&business consultant**
- Anti money laundering, small business, OFSA interfaces
  - DataStage, Oracle Data Integrator (ODI), SAS ETL senior (data warehouse and data mart).
- April 2010 – June 2011**      **IQSYS ZRt. (Data Mining Knowledge Center) – senior IT&business consultant**
- Hungarian Telecom data warehouse project (Hibrid Integrated Financial Intelligence).
  - Oracle, SAS ETL senior (data warehouse and data mart) and OLAP senior (MS BIDS).
- March 2006 – June 2009**      **RISK Solutions Ltd. – senior IT consultant, project manager**  
**Projects:**
- Dec. 2007 –      **CIB Bank Hungary (subsidiary of INTESA Group) – project manager**  
Jan. 2009
- IT Project manager (2 developers): application-deal data consistency project (SAS, SAS DI Studio, record linkage with text mining, .Net C# utilities).
- Nov. 2007 –      **MKB Bank Hungary (subsidiary of Bayern LB) – project manager, consultant**  
June 2009
- IT Project manager (4 developers): ALCO: interest rate risk, liquidity risk data mart development, cash flow prediction, discount factor stress scenarios, (Oracle, SAS, MQ Series, Oracle Warehouse Builder, Globus, Kondor)
  - Senior IT and business consultant: Managerial accounting system (IFRS) development project (SAS, SAS BI Portal), Oracle data warehouse redesign.
- March 2006,      **Raiffeisen Bank Hungary (subsidiary of Raiffeisen Zentral Bank) – consultant**  
Nov. 2007
- Senior IT and business consultant, Data Warehouse and Basel II project
  - Data warehouse development with DataStage on Oracle
  - Senior business consultant of Basel II, SME microscoring, debt management
  - Leader of mapping activity, subject area leader of account, contract, scoring and debt management subject areas. Member of general ledger reconciliation team. Responsible for data warehouse specifications and automated testing.
- January 2005 – July 2005**      **ANSYS Inc.: (Pittsburgh,PA USA, S&P500) – consultant**
- expert help system implementation for finite element simulation system
  - document clustering, keyword generation, stemming, parsing, briefing
  - spectral information retrieval (with TFIDF and Fourier transform)
  - compact document representation with finite state automata
  - document vector space distance metrics and latent semantic indexing.
- February 2003 – Sept. 2004**      **Dorsum Ltd. (one of the biggest banking IT vendor in Hungary) – analyst**
- Junior Development Consultant, Business Analyst
  - implementation of corporate banking controlling support system
  - development of multiproject management system
  - documentation of quality assurance regulations to ISO system
  - front-office thin-client system development for the biggest Hungarian Bank.
- May 2001 – July 2002**      **KPMG Consulting Budapest Office – consultant**
- SAP FI, CO, BW,BSC, BPR junior consultant
  - BPR project of the biggest Slovakian gas company
  - BSC project at the biggest Hungarian mobile communications company.
- 2000 –**      **IT contractor for temporary projects:**
- General research and solution providing contracts, scientific research projects
  - EDI consulting and sales prediction with statistical machine learning
  - On-line secure purchase supporting system at an architectural company
  - Textmining system for an editorial company and for an electronic library
  - Internet portal and flash actionscript development for small businesses
  - Linux server administration, email services for several small businesses
  - Invoice application and warehouse softwares for several small businesses
  - Agricultural administration software for agricultural companies
  - Captcha and user authentication frameworks for small businesses
  - Purchase optimization system for a pharmacy chain company
  - Debt collection software with SOA .Net for a big Cypriot company
  - Automated algorithmic trading system (on InteractiveBrokers API)
  - Electrical engineering services, device design and manufacturing
  - E-commerce portal with back end for an ebook store with mobile platforms.

## Skills

### Leadership skills

Management of complex IT implementations, research projects, resource planning, work brakedown structure planning, value based management, understanding client needs, motivate team members, translate strategy into actions, working under stress and time pressure with financial responsibility.

### IT, development environments, applications

**Application development** (Microsoft Visual Studio, PowerBuilder, Eclipse, NetBeans, PL/SQL Developer, OLAP tools (Cognos, Business Objects, MS Business Intelligence Dev. Studio));

**Programming** (C++, Visual C++, C#, J#, ANSI C, Fortran, JAVA 2 SE, JavaScript, HTML, XML, PHP, Flash ActionScript, AJAX, PL/SQL, SAS BASE, SAS Macro, Verilog, VHDL, Perl, Visual Basic, Assembly, ASP.Net, DirectX, OpenGL, .Net Framework (WinForms, WCF, WPF, XAML, WSDL, LINQ, SOA), iPhone SDK, monoTouch, monoDroid);

**Mathematics tools** (MathWorks (MatLab), Microsoft Solver Foundation, NeuroSolutions, SPSS, Statistica, data and text mining libraries (Lucene, Weka, GATE, LingPipe, TIKKA – under .Net with IKVM), Mono (for C#));

**Business design and ETL tools** (Aris Toolset, DataStage Designer and Administrator (ETL tool), Oracle Warehouse Builder (OWB – ETL tool), SAS DI Studio, SAS BI portal, ErWin Data Modeller, Oracle Designer), Microsoft OLAP (Business Intelligence Development Studio) with Excel drill down;

**Banking applications** (Fermat, LondonBridge Debt Manager, KAPITI, Globus, KONDOR);

**Electrical engineering tools** (Microchip MPLab, PADS, ORCAD, AUTOCAD, AutoDesk Inventor, Altium Designer, Mentor Graphics VLSI and catalog IC design, XMOS multicore silicon technology);

**Multimedia and office** (Office (MS Office Pro (including Access, Visio, Project, Publisher), XNA Game Studio, Thomson Reuters DataStream, 3D Studio Max, Windows Movie Maker, Adobe Premiere with Encore, Photoshop, Illustrator);

**Database management** (MS SQL, FireBird, MySQL, Oracle 10g, SAS, db4o, SQLite, IBExpert, Database Desktop).

### Special expertise

Text Mining, Enterprise application planning, UML design, object oriented design and patterns, interface design (MQ), data warehouse technology, database design (including star-scheme and snowflake-scheme), client-server architectures, .Net technology, Balance Scorecard methodology, BPR, kvantitative knowledge management, managerial accounting, corporate finance, financial portfolio management, algorithmic trading experience (InteractiveBrokers API), management of complex IT and research projects (ITIL, CobiT, CMMI, Microsoft Solutions Framework), expert systems, OLAP development (MS Business Intelligence Development Studio), artificial intelligence theory (especially neural networks, information retrieval, data mining, textmining, procedural content (Perlin Noise), genetical algorithms, machine learning, natural language processing, multivariate statistics, Bayes probability theory and Bayesian networks, empirical density forecast), risk management, decision support under uncertainty, 3D game development, autonomous robot development, microcontroller system design and implementation, multimedia, innovation research (Frascati principles), mathematics.

### Other

Driving Licence, HAREC + Morse Radio Amateur Licence, Certified Ethical Hacker (in progress)

### Hobby

Travelling with my wife, social activities with friends, playing computer games, watching movies, doing sports, assembly with relatives, robotics, computer game development.

## Languages

Hungarian: native  
English: fluent  
German: basic

## Most important scholarships

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|--------------------------------|--|
| Year 2010                      | Young Entrepreneur of the Future (Dreher Social Responsibility award) 3rd  |
| 2009/2010 1 <sup>st</sup> term | Hungarian Eötvös Scholarship (University of Cyprus, Nicosia, Cyprus)   |
| 2005/2006 1 <sup>st</sup> term | European Union Exchange Scholarship (Sacred Heart University, Luxembourg)  |
| 2005/2006 2 <sup>nd</sup> term | European Union Exchange Scholarship (University of Cyprus, Nicosia, Cyprus)  |
| Year 2004/2005                 | Fulbright Scholarship (Carnegie-Mellon University, Pittsburgh, PA, USA);<br>eHungary Scholarship (Hungarian Scholarship Committee, Carnegie-Mellon University, Pittsburgh, PA, USA); |
| Year 2002-2005                 | Hungarian Doctorate Scholarship;   |
| Year 2004/2005                 | OTDK (National Scientific Student Conference) 1st place (management section; quantitative knowledge management);   |
| Year 2001/2002                 | Hungarian Academy of Sciences – Analogical and Neurocomputing Research; Institute (MTA-SZTAKI) Scholarship (applications of cellular neural networks);                               |
| Year 2001/2002                 | Scholarship of the Hungarian Republic;   |
| Year 2000/2001                 | Scholarship of the Budapest University of Technology and Economics – Economic and Social Sciences Faculty;   |
| Year 1998/1999                 | Scholarship of the Budapest University of Technology and Economics;  |
| Year 1998/1999                 | Scholarship of the Hungarian Republic.   |

## Publications

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|------|--|
| 2011 | Mihaly Ormos, Miklos Vazsonyi: Impacts of Public News on Stock Market Prices: Evidence from S&P500, Interdisciplinary Journal of Research in Business                            |
| 2010 | Design and Implementation of Control Software Platform for Autonomous Mobile Robot (Fifth National Challenge of Applied Engineering Sciences (also known as Hungarians on Mars)) |
| 2009 | Overview of Quantitative News Interpretation Methods Applied in Financial Market Predictions (Periodica Polytechnica)  |
| 2008 | Classification of Knowledge Management Projects (co-author; Lomonosov Moscow State University Conference proceeding)   |
| 2008 | Lifecycle and Results of R&D Funds in the Research Financing Models of the EU and the US (BUTE PHD Conference)   |
| 2007 | Knowledge Management and Competitive Intelligence (IIR-Hungary Conference Budapest)  |
| 2007 | Co-author of Textmining book in Hungarian, awarded by the National Lecture Book Foundation (Published by Typotex)  |
| 2007 | Lossless Representation of Text Data with Relational Database Architecture to Support Textmining Operations (BUTE Alma Mater)  |
| 2007 | Scenario Tree Generation Methods Applied in Financial and Economic Decision Making (Periodica Polytechnica)  |
| 2006 | Business Value from Data: Model of Information Retrieval (book article, published by the Association of Hungarian Information Brokers)   |
| 2005 | Monte Carlo Simulation based Behavior Analysis and Training of Genetically Evolved Feedforward Neural Networks (BUTE Alma Mater)   |
| 2005 | Rapid Method to Unique Term Extraction and Recognition over Large Document Corporuses using Finite State Automata (BUTE Alma Mater)  |
| 2005 | Compact Document Representation Method to Support Quick Information Retrieval (BUTE Alma Mater)  |
| 2004 | Language Detection using Hidden Markov Model (BUTE Alma Mater)   |
| 2004 | Universal software architectures for registry, report creator and workflow administrator applications (BUTE Alma Mater)  |
| 2003 | Forced Corporate Knowledge Sharing (BUTE Alma Mater)   |
| 2003 | Knowledge based Corporate Controlling (BUTE Alma Mater)  |
| 2002 | Communication Engineering (Hungarian Telecommunication Journal): New CNN based CAC Algorithms in Pocket Switched Networks  |